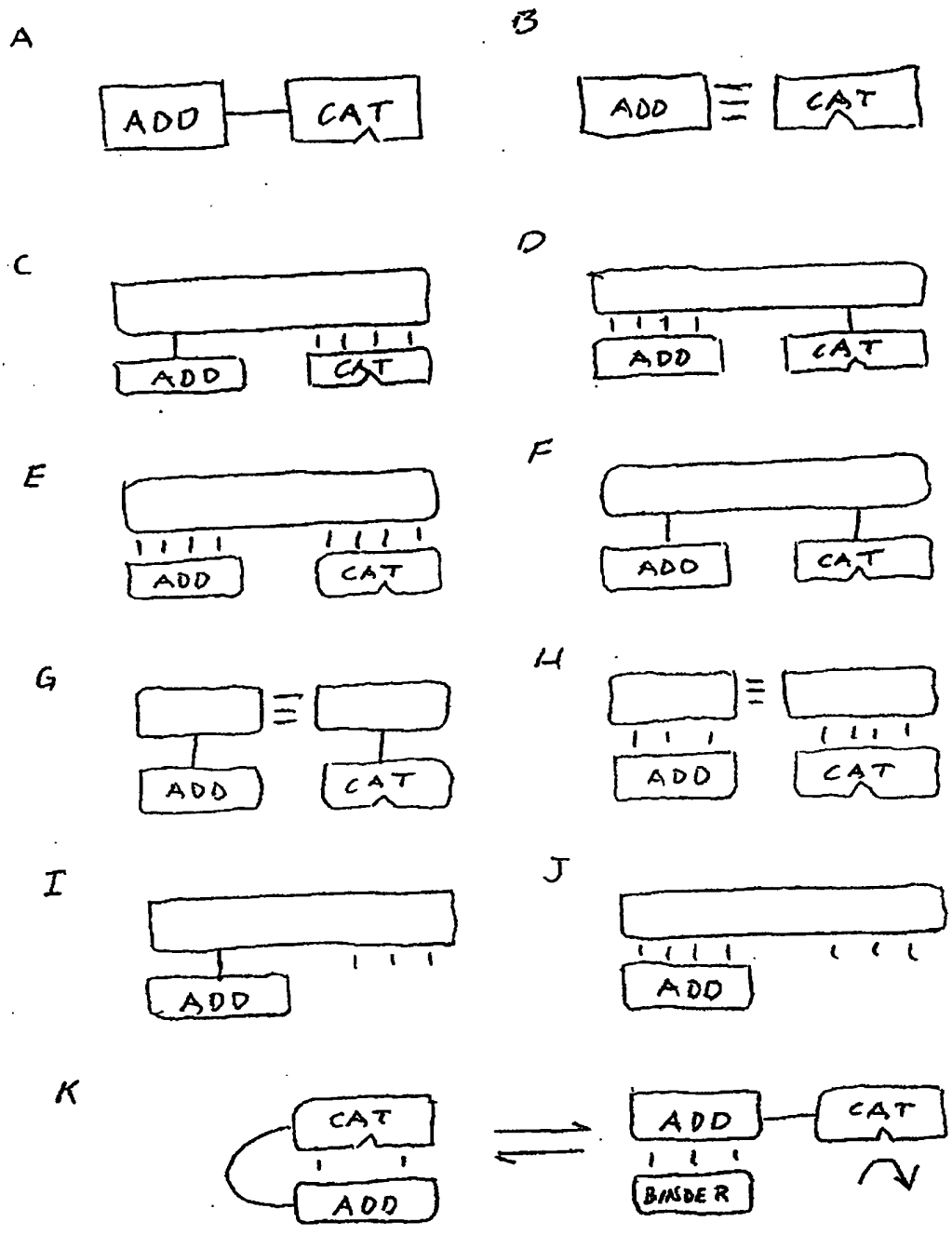

A
ADD
CAT
B
ADD
CAT
C
ADD
CAT
D
ADD
CAT
E
ADD
CAT
F
ADD
CAT
G
ADD
CAT
H
ADD
CAT
I
ADD
J
ADD
K
CAT
ADD
ADD
CAT
BINDER

FIG. 1

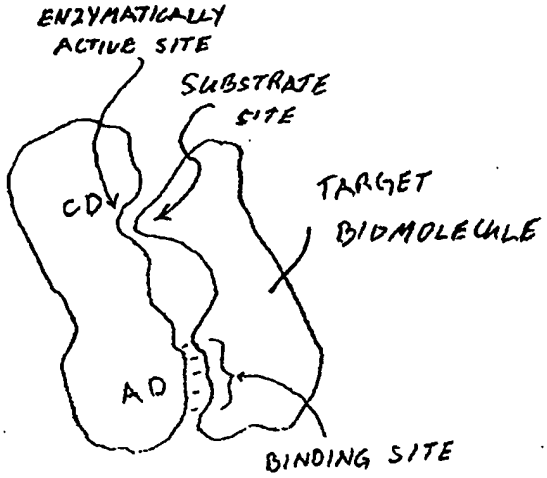


FIG 2A

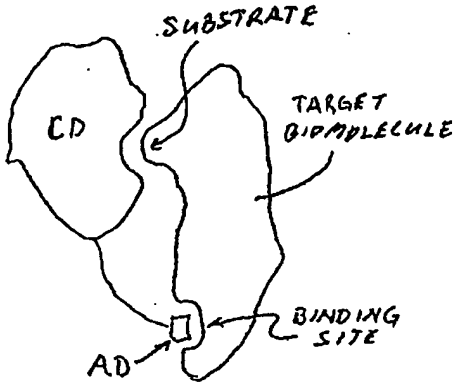


FIG 2B

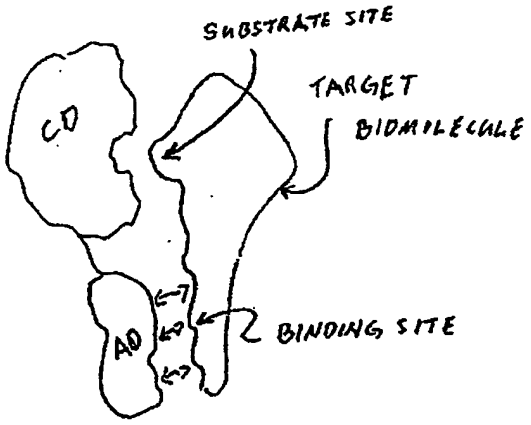


FIG. 2C

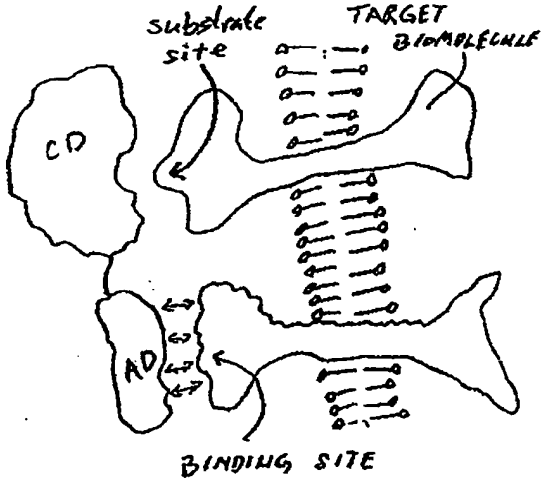


FIG 2D

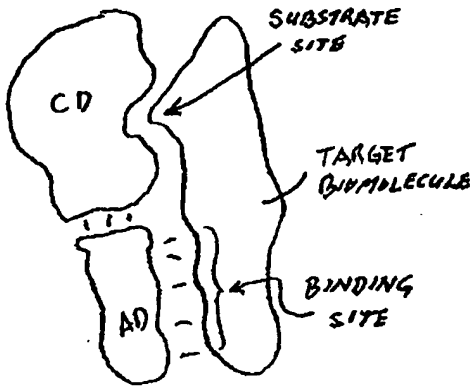


FIG 2E

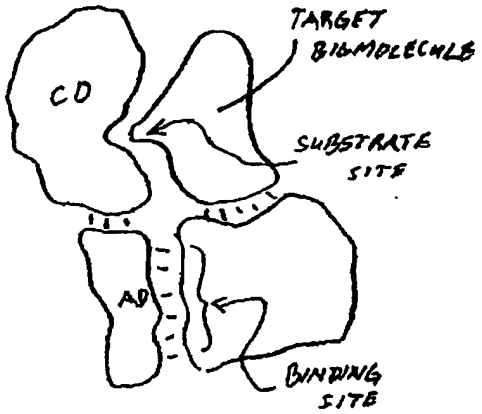


FIG 2F

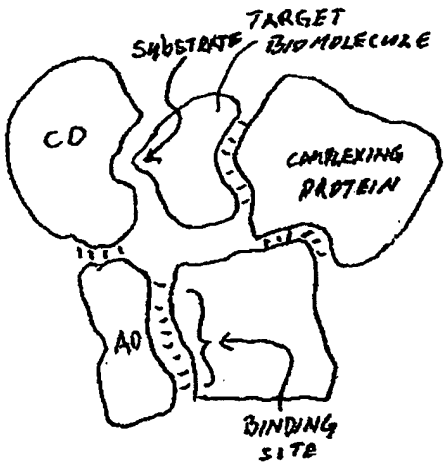


FIG 2G

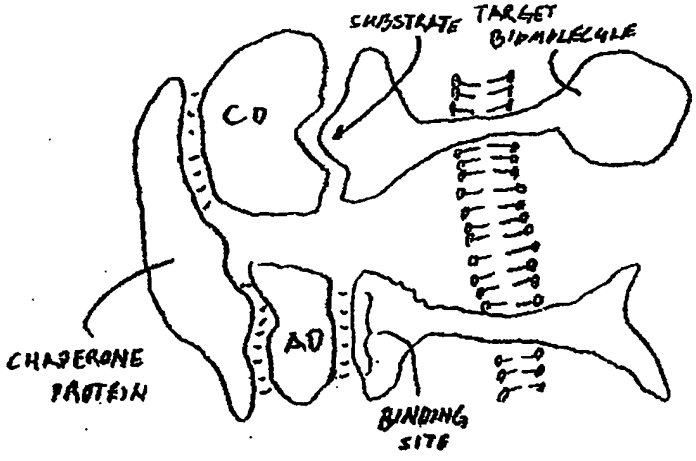


FIG 2H

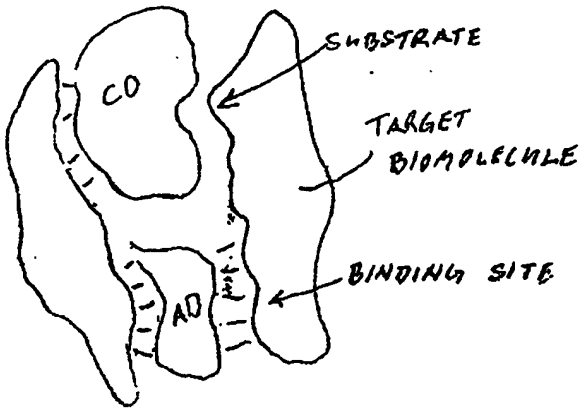


FIG 2I

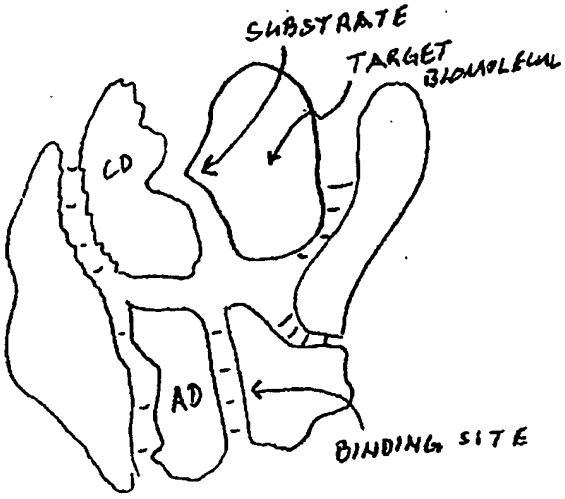


FIG 2J

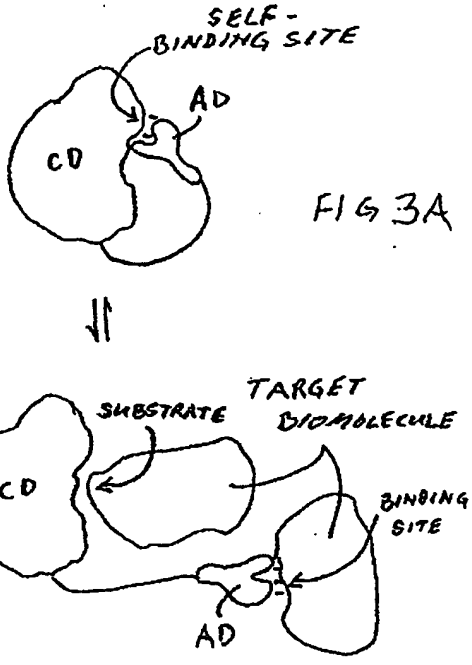


FIG 3A

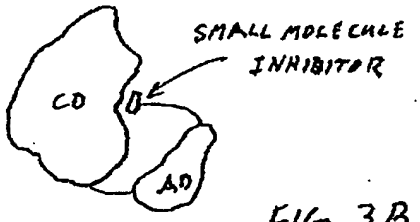
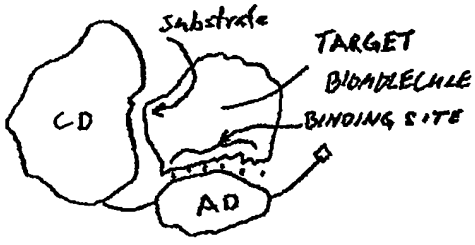


FIG. 3B



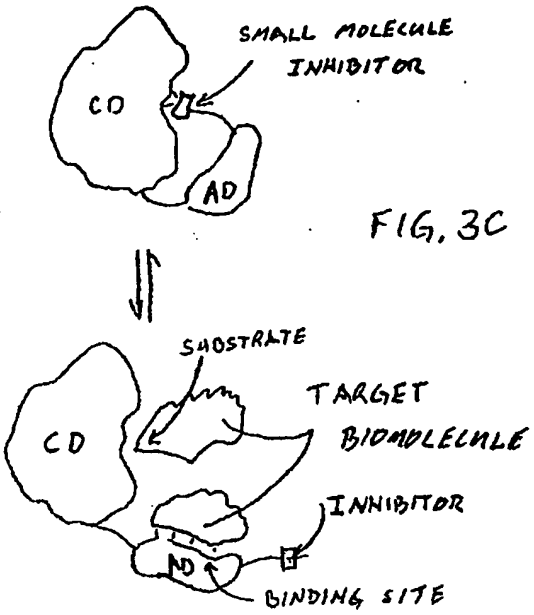


FIG. 3C

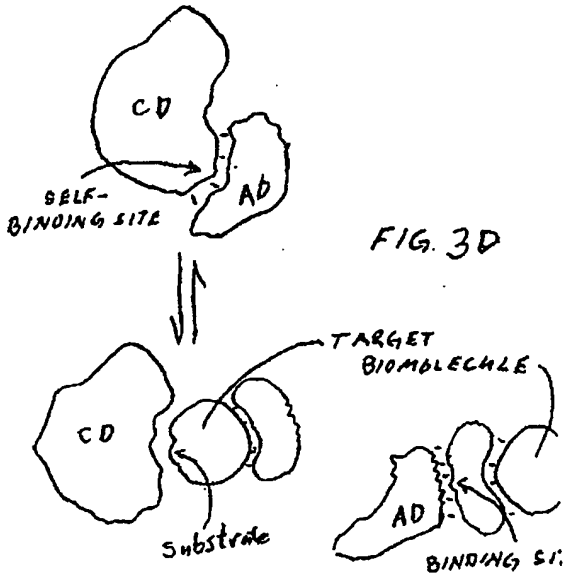


FIG. 3D

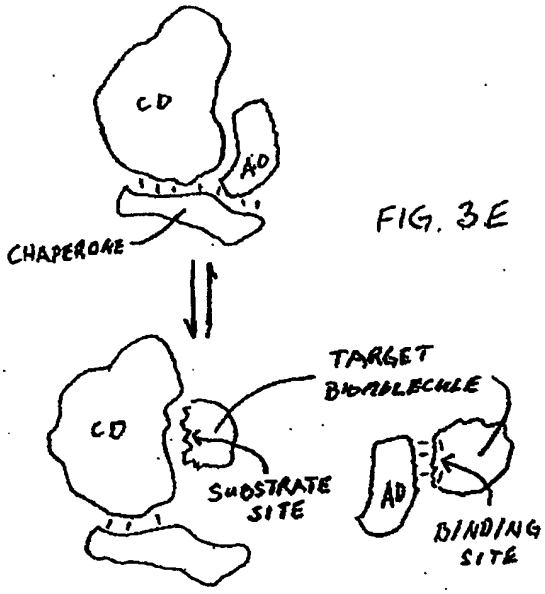


FIG. 3E

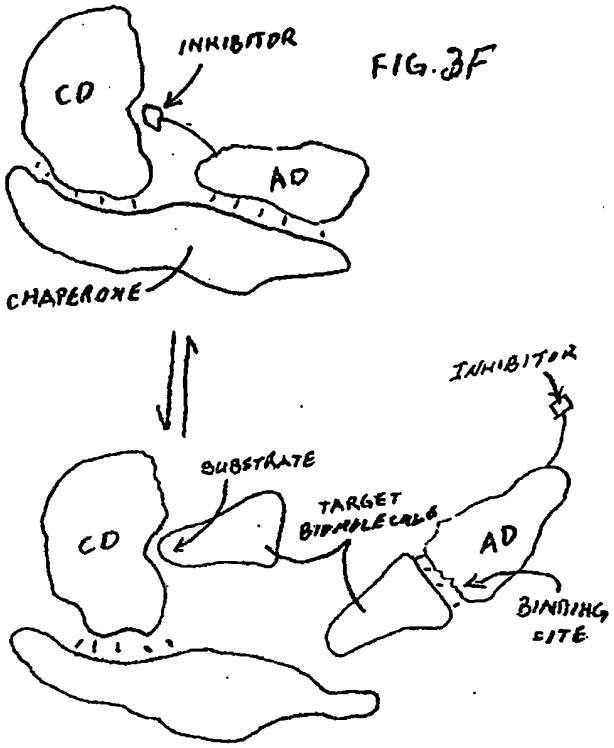

INHIBITOR
CD
AD
CHAPERONE
INHIBITOR
SUBSTRATE
TARGET
CD
AD
BINDING
SITE

FIG. 3F

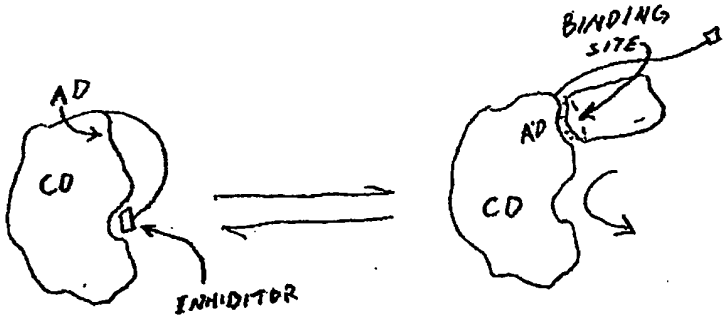
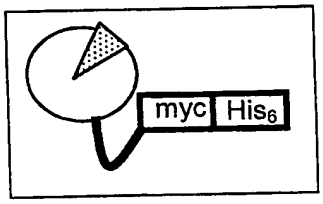

BINDING
SITE
AD
AD
CD
CD
INHIDITOR

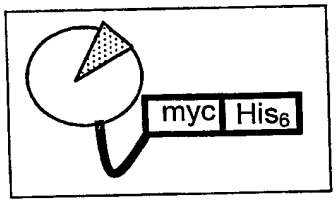
FIG 3G

Fig. 4

Enzyme: prethrombin



Address: scFvαHA



Model ADZYME: prethrombin-(GGGGS)3-scFvαHA

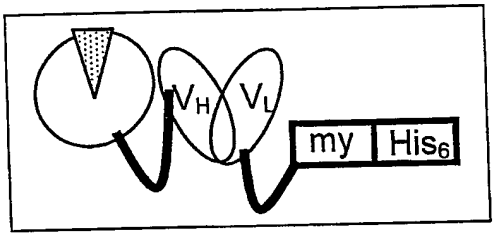
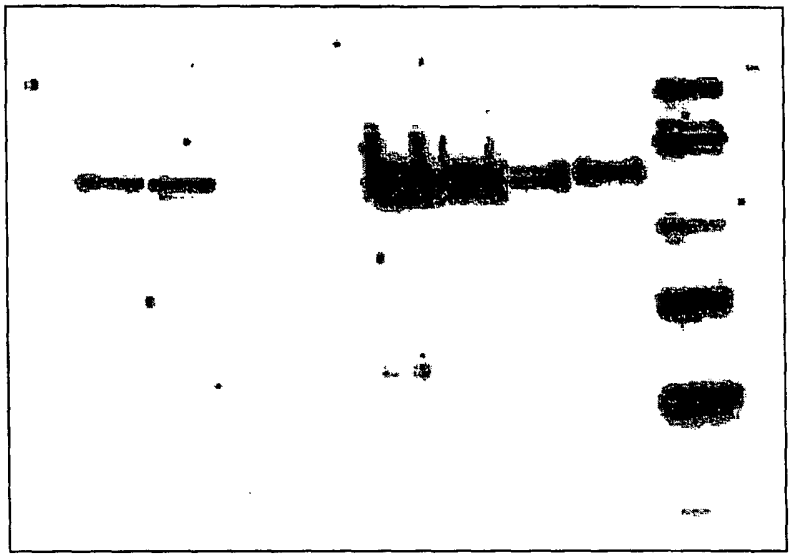


Fig. 5

Panel A



Panel B

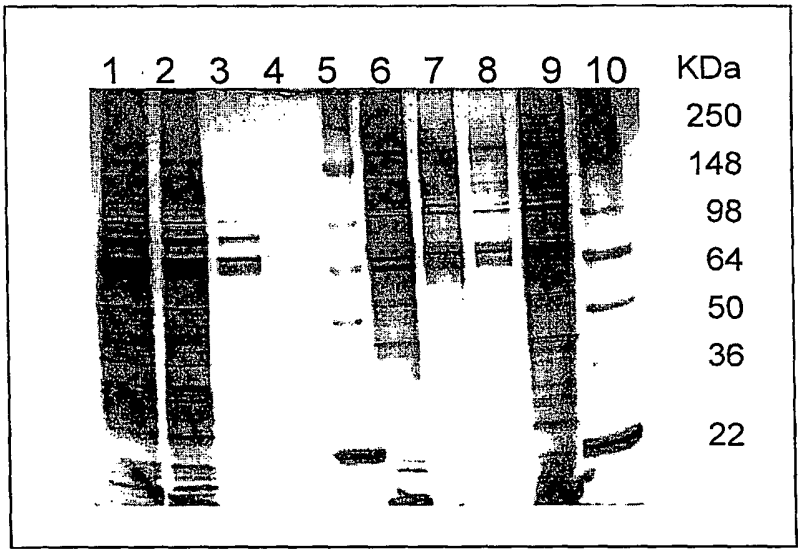


Fig. 6

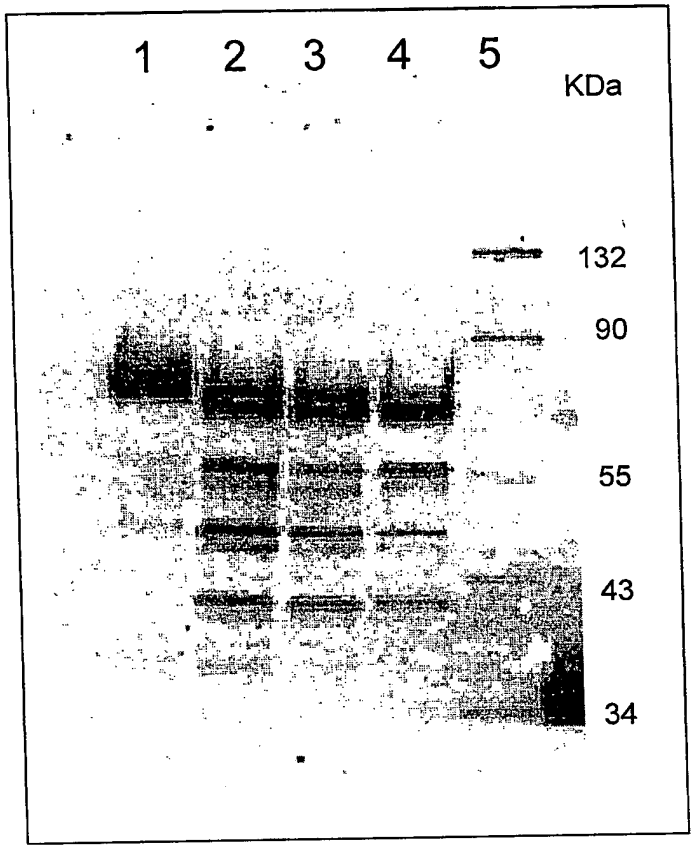


Fig. 7

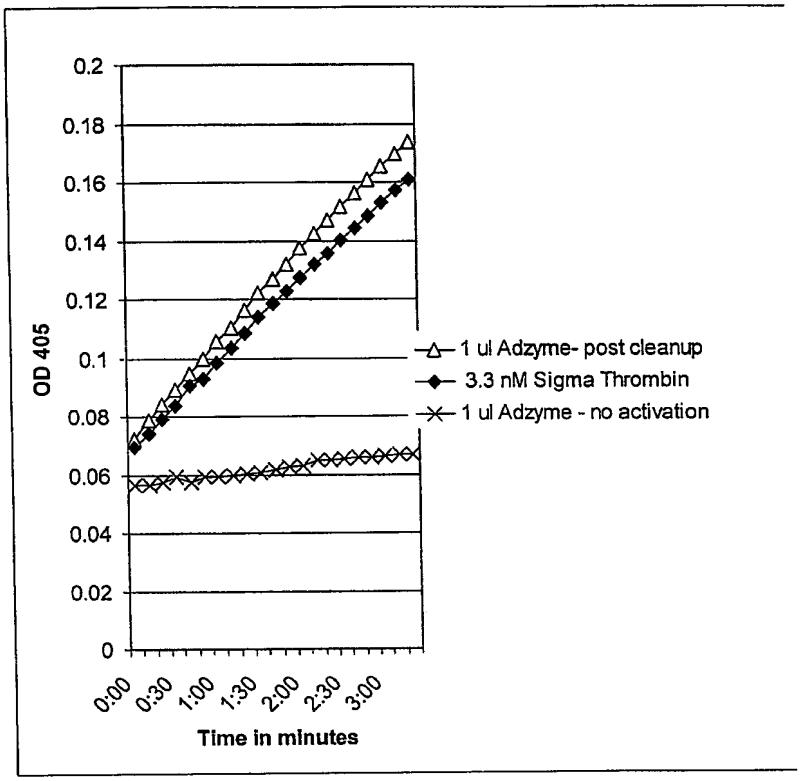

0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
OD 405
0:00
0:30
1:00
1:30
2:00
2:30
3:00
Time in minutes
1 ul Adzyme- post cleanup
3.3 nM Sigma Thrombin
1 ul Adzyme - no activation

Fig. 8

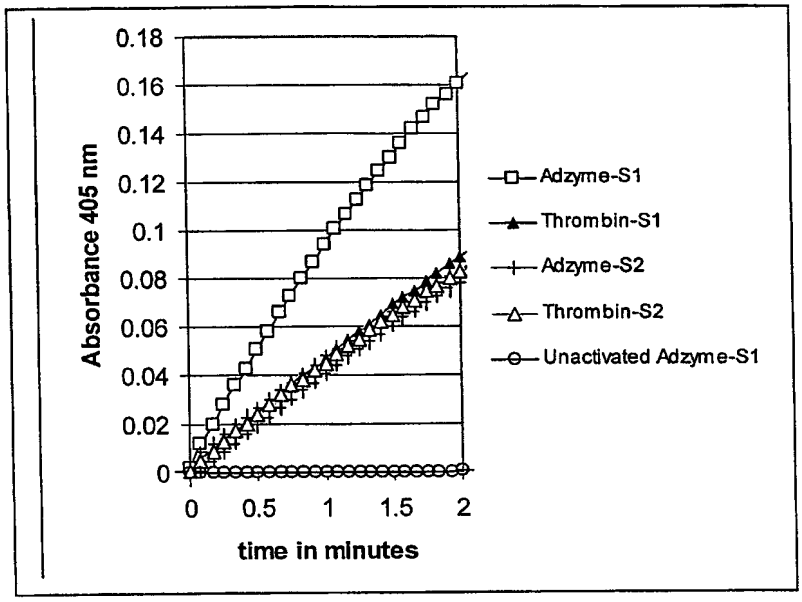

0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Absorbance 405 nm
0
0.5
1
1.5
2
time in minutes
Adzyme-S1
Thrombin-S1
Adzyme-S2
Thrombin-S2
Unactivated Adzyme-S1

Fig. 9

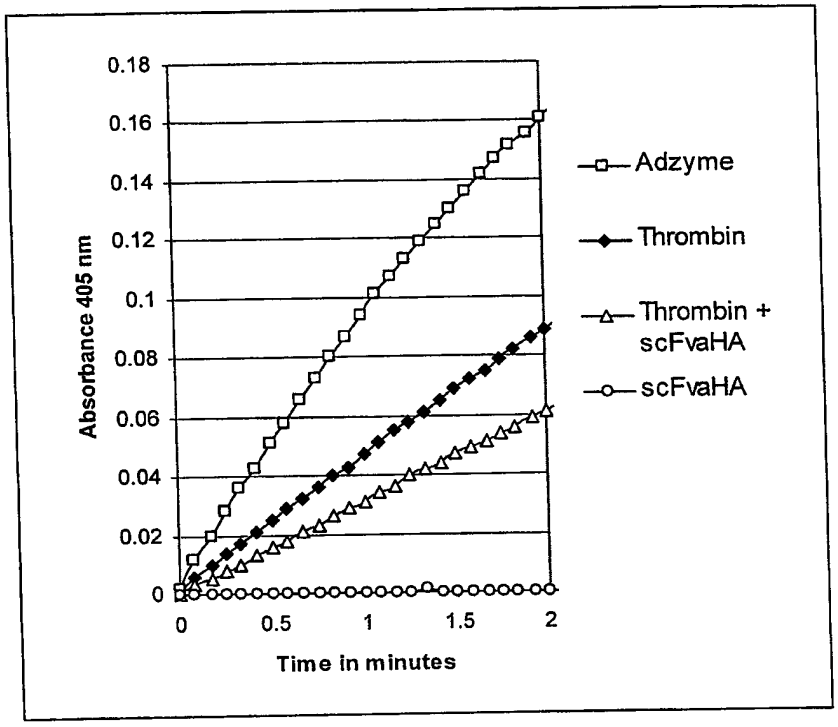

0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Absorbance 405 nm
0
0.5
1
1.5
2
Time in minutes
Adzyme
Thrombin
Thrombin + scFvaHA
scFvaHA

Fig. 10

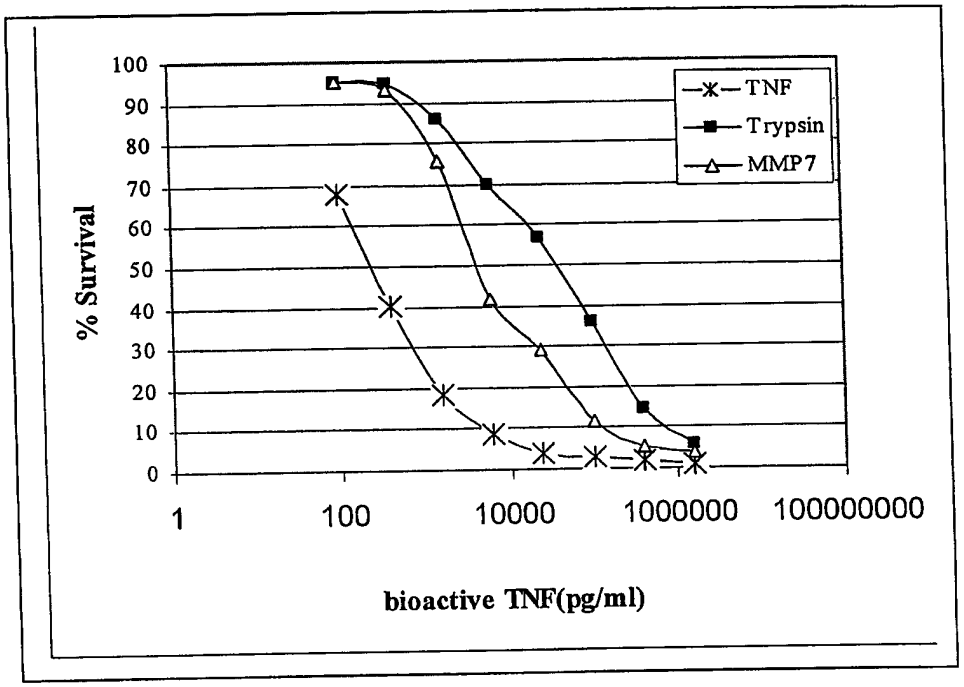

100
90
80
70
60
50
40
30
20
10
0
% Survival
1
100
10000
1000000
100000000
bioactive TNF(pg/ml)
TNF
Trypsin
MMP7

Fig. 11

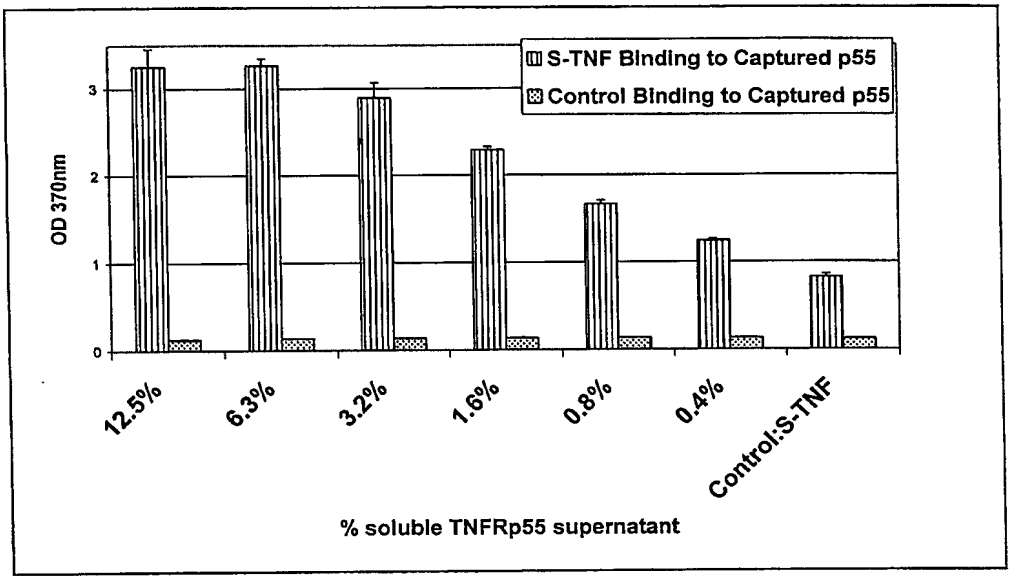

S-TNF Binding to Captured p55
Control Binding to Captured p55
OD 370nm
0
1
2
3
12.5%
6.3%
3.2%
1.6%
0.8%
0.4%
Control:S-TNF
% soluble TNFRp55 supernatant

Fig. 12

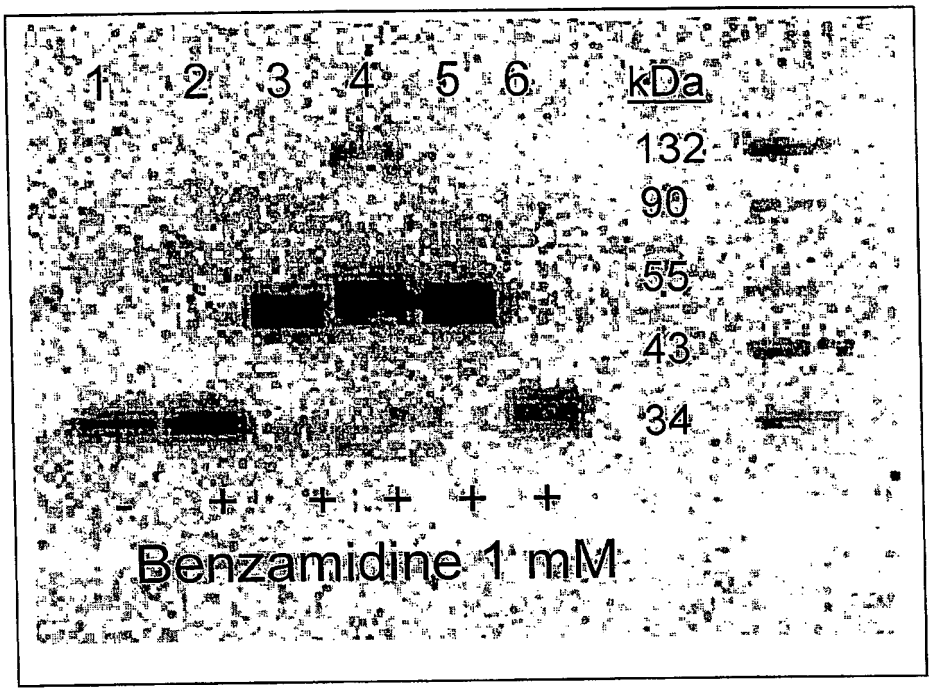


Fig. 13

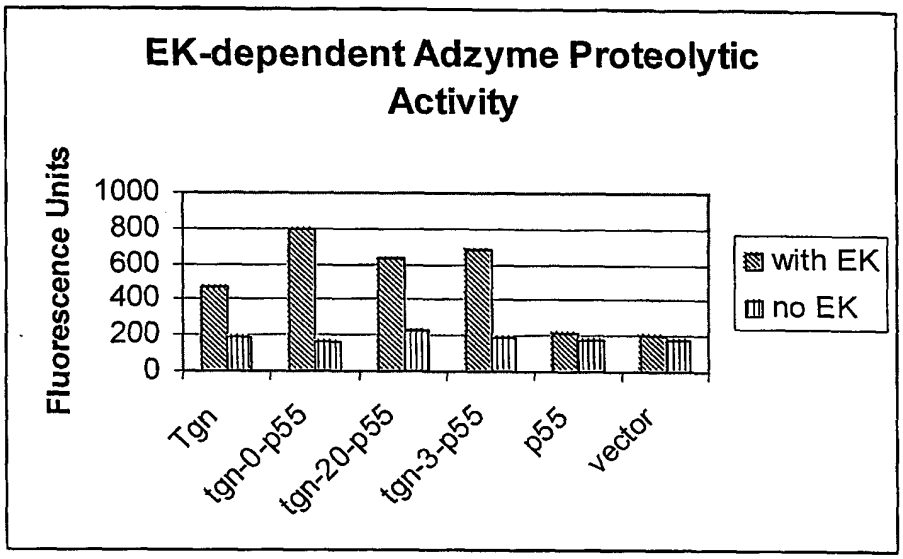

EK-dependent Adzyme Proteolytic Activity
Fluorescence Units
1000
800
600
400
200
0
Tgn
tgn-0-p55
tgn-20-p55
tgn-3-p55
p55
vector
with EK
no EK

Fig. 14

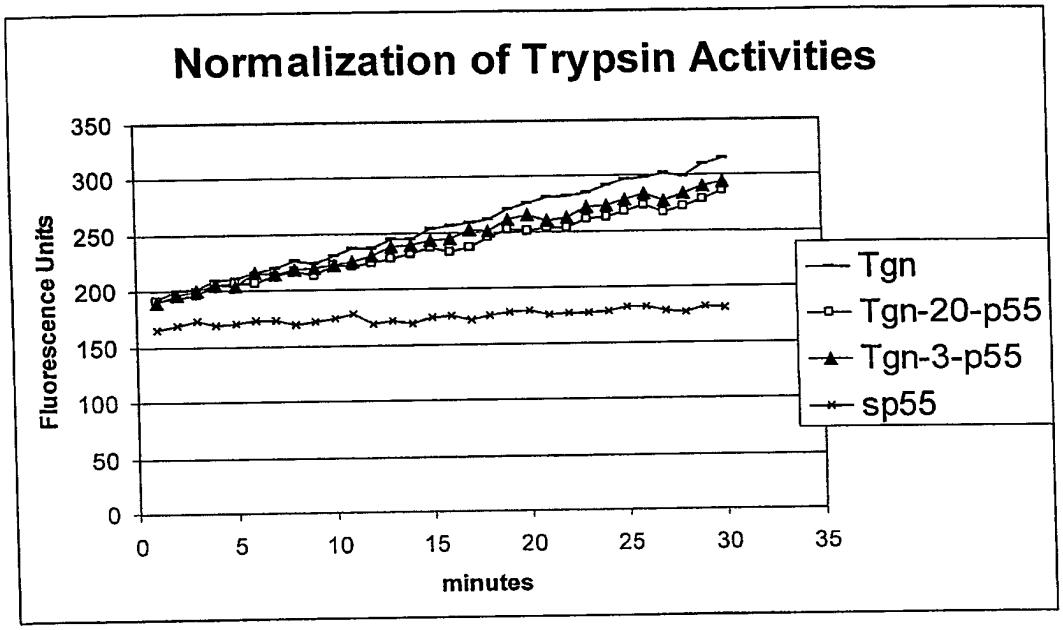

Normalization of Trypsin Activities
Fluorescence Units
350
300
250
200
150
100
50
0
0
5
10
15
20
25
30
35
minutes
Tgn
Tgn-20-p55
Tgn-3-p55
sp55

Fig. 15.

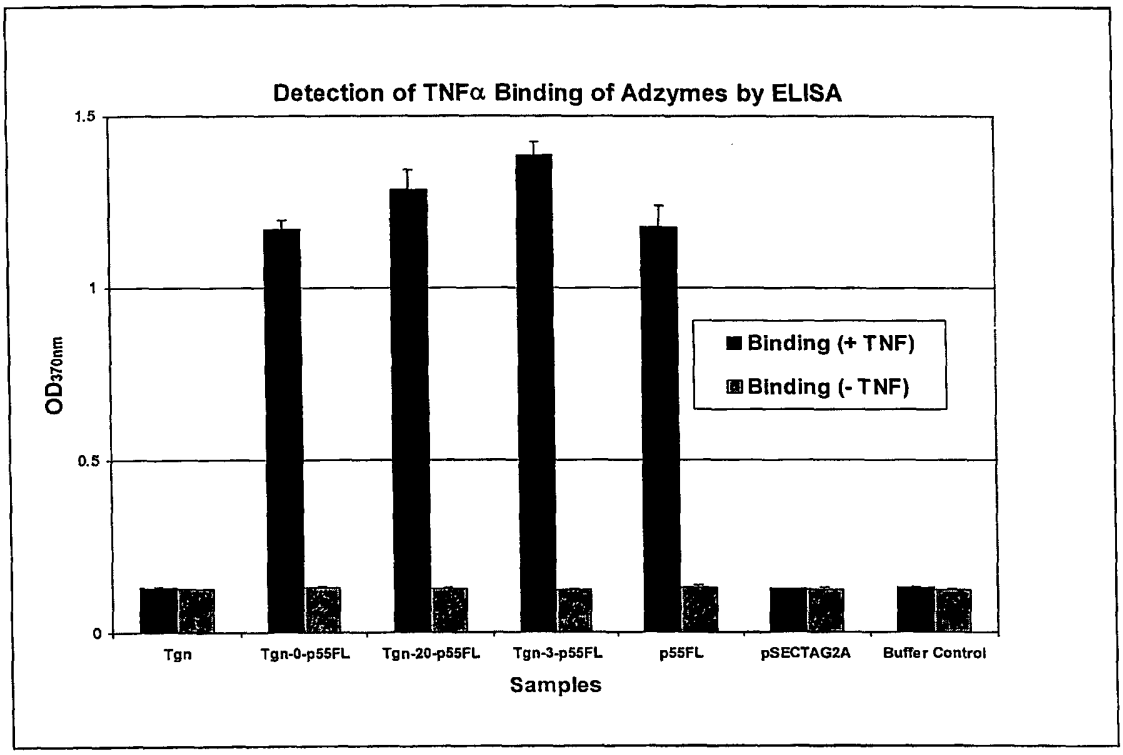
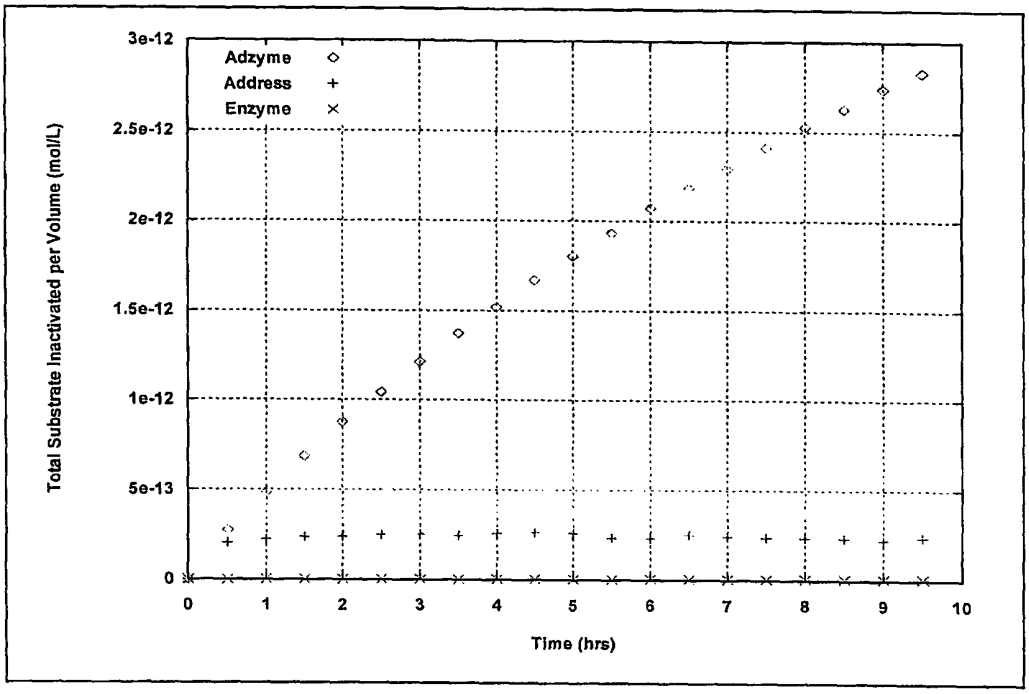

Detection of TNFα Binding of Adzymes by ELISA
1.5
1
0.5
0
OD370nm
Binding (+ TNF)
Binding (- TNF)
Tgn
Tgn-0-p55FL
Tgn-20-p55FL
Tgn-3-p55FL
p55FL
pSECTAG2A
Buffer Control
Samples

Fig. 16


Adzyme
Address
Enzyme
Total Substrate Inactivated per Volume (mol/L)
3e-12
2.5e-12
2e-12
1.5e-12
1e-12
5e-13
0
0
1
2
3
4
5
6
7
8
9
10
Time (hrs)